

Amendments to the Drawing Figures:

The attached drawing sheet includes a new FIG. 8.

Attachment: New Drawing Sheet

REMARKS/DISCUSSION OF ISSUES

By this amendment, Applicant adds a new FIG. 8 to show a projecting lens mentioned in the specification on pages 5 and 6, and amends the specification to make explicit reference to the new FIG. 8. No new matter is added. Applicant also: cancels claims 8, 9 and 15 without disclaimer of the underlying subject matter or prejudice against future prosecution; amends claims 1, 7 and 13; and adds new claims 16-23. Accordingly, claims 1-7, 10-14 and 16-23 remain pending in the application.

Reexamination and reconsideration are respectfully requested in view of the following Remarks.

35 U.S.C. §§ 102 and 103

The Office Action rejects: claims 1, 11 and 15 under 35 U.S.C. § 102 over Sakata et al. U.S. Patent 7,192,147 ("Sakata"); claims 1-5, 7-10 and 12-14 under 35 U.S.C. § 103 over Jagt et al. U.S. Patent 7,265,800 ("Jagt") in view of Miyazaki U.S. Patent 6,065,845 ("Miyazaki"); and claims 6 and 11 under 35 U.S.C. § 103 over Jagt, Miyazaki and Yokoyama U.S. Patent 6,547,400 ("Yokoyama").

Applicant respectfully submits that claims 1-6 and 10-14 are all patentable over the cited art for at least the following reasons.

Sakata

Claim 1

Among other things, the illumination system of claim 1 includes a first light refractive structure arranged in proximity to the light guide exit face, wherein all light beams incident upon the first light refractive structure from a side of the light refractive structure closest to the entrance face and at a first angular interval with respect to the optical axis of the system are refracted to illuminate the light guide exit face, and all light beams incident upon the first light refractive structure from a side of the light refractive structure closest to the entrance face and at a second angular interval with respect to said optical axis are reflected to be recycled in the light guide.

Applicant respectfully submits that Sakata does not disclose any light guide having this combination of features.

As best as the undersigned attorney can understand the Examiner's interpretation of Sakata, it is the Examiner's position that the reflective polarizing plate 8 of Sakata will "inherently" refract light beams of a first angular interval and will "inherently" reflect light beams of a second angular interval.

Without conceding the validity of this position – and particularly the argument that the reflective polarizing plate 8 refracts any light beams as opposed to simply passing such light beams straight therethrough – Applicant respectfully submits that as clarified, claim 1 now clearly recites the a refractive structure that either reflects or refracts light beams depending on incident angle, and treats all light beams of a given incident angle the same regarding reflection or refraction, regardless, for example, of polarization. Applicant respectfully submits that the reflective polarizing plate 8 of Sakata can never do this, nor could any element be substituted in its place to do this, since it is critical for the operation of Sakata's projector, and particularly the subsequent LC light valve 5, that the light be passed or reflected depending upon polarization.

Accordingly, for at least these reasons, Applicant respectfully submits that claim 1 is patentable over Sakata.

Claim 11

Claim 11 depends from claim 1 and is deemed patentable over Sakata for at least the same reasons set forth above with respect to claim 1.

Jagt and Miyazaki

Claim 1

Among other things, in the illumination system of claim 1, the entrance face and exit face of the light guide are opposite to and in parallel with each other. This is the same feature that was previously recited in claim 15, which has now been canceled. Applicant notes that the Examiner has not rejected claim 15 based on any combination that includes Jagt and Miyazaki.

Accordingly, for at least these reasons, Applicant respectfully submits that claim 1 is patentable over Jagt and Miyazaki.

Claims 2-5, 7-10 and 12-14

Claims 2-5, 7-10 and 12-14 all depend from claim 1 and are deemed patentable over Jagt and Miyazaki for at least the reasons set forth above with respect to claim 1. Attention is also directed to the amendment to claim 13.

Claims 6 and 11

Claims 6 and 11 depend from claim 1. Applicant respectfully submits that Yokoyama does not remedy the shortcomings of Jagt and Miyazaki as set forth above with respect to claim 1. Accordingly, claims 6 and 11 are deemed patentable over Jagt, Miyazaki and Yokoyama for at least the reasons set forth above with respect to claim 1.

NEW CLAIMS 16-23

New claims 16-18 all depend from claim 1 and are deemed patentable for at least the reasons set forth above with respect to claim 1, and for various novel features recited therein.

Among other things, the illumination system of claim 19 includes an entrance face at a first end of the rod-type light guide, the entrance face having an aperture formed therein wherein a light source can be provided, a mirror disposed on the entrance face, the mirror having an aperture therein wherein the light source can be provided, and an exit face at a first end of the rod-type light guide opposite and in parallel to the first face, an optical axis extending between the entrance face and the exit face in a direction perpendicular to the entrance face and the exist face. Applicant respectfully submits that none of the cited references discloses or suggests an illumination system including this combination of features. Also, the above-described arrangement further including the light refractive structure of claim 19 is not disclosed or suggested by any of the cited references.

New claims 20-23 depend from claim 19 and are deemed patentable over the cited art for at least the reasons set forth above with respect to claim 19, and or

various novel features recited therein.

CONCLUSION

In view of the foregoing explanations, Applicant respectfully requests that the Examiner reconsider and reexamine the present application, allow claims 1-7, 10-14 and 16-23 and pass the application to issue. In the event that there are any outstanding matters remaining in the present application, the Examiner is invited to contact Kenneth D. Springer (Reg. No. 39,843) at (571) 283.0720 to discuss these matters.

Respectfully submitted,

VOLENTINE & WHITT



By:

Kenneth D. Springer
Registration No. 39,843

VOLENTINE & WHITT
One Freedom Square
11951 Freedom Drive, Suite 1260
Reston, Virginia 20190
Telephone No.: (571) 283.0724
Facsimile No.: (571) 283.0740